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1919–1928

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BY

JOHN M. NICKLES

POLITECHNIKA GDAŃSKA • ZAKŁAD GEOLOGII

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By JOHN M. NICKLES

POLITECHNIKA GDAŃSKA ZAKŁAD GEOLOGII

INTRODUCTION

The bibliography of North American geology, including paleontology, petrology, and mineralogy, for the years 1919–1928 lists publications on the geology of the Continent of North America and adjacent islands and on Panama and the Hawaiian Islands. It includes textbooks and papers of general character by American authors, but not those by foreign authors, except papers that appear in American publications.

The papers, with full title and medium of publication, are listed under the names of their authors, which are arranged in alphabetic order. The author list is followed by an index to the literature cited.

The bibliography of North American geology to the end of 1926 is contained in the following bulletins of the United States Geological Survey: 127 (1732–1892), 188 and 189 (1892–1900), 301 (1901–1905), 372 (1906–7), 409 (1908), 444 (1909), 495 (1910), 524 (1911), 545 (1912), 584 (1913), 617 (1914), 645 (1915), 665 (1916), 684 (1917), 698 (1918), 731 (1919–20), 758 (1921–22), 784 (1923–24), and 802 (1925–26). All these bulletins are now out of print but may be consulted in the larger libraries. They have been cumulated in Bulletins 746 and 747 (1785–1918), also now out of print, and Bulletin 823 (1919–1928). The bibliography for 1927 and 1928, which is included in the present bulletin, will not be published separately.

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Bragg Creek area: Hume, 30.
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Crowsnest coal field, northern part: Rose, 1.
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Drumheller district: Allan, 7.
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Highwood area: Rose, 2.
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Paskapoo formation: Allan, 20.
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Saunders Creek and Nordegg coal basins: Allan, 9.
Sheep River area: Slipper, 2.
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Swan Hills, Lesser Slave Lake district: Allan, 1.
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northeastern: Stewart, J. S., 2.
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Kern County: English, W. A., 1.
La Jolla quadrangle: Hanna, M. A., 3.
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Mount Diablo: Clark, B. L., 13.
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San Diego County: Ellis, A. J., 1.
Santa Barbara County, Santa Ynez River district: Kew, 2; Nelson, R. N., 1.
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southeastern: Coffin, 4; Carlile shale and Timpas limestone, merging: Patton, H. B., 2.
southwestern: Coffin, 3; Forrester, J. B., 1.
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Weld County, Laramie formation: Toepelman, 4.
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western: Seward, 4.
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Hidalgo-Vera Cruz region: Palmer, R. H., 4.
Lower California: Darton, 10; Marland Oil Co., 1.
Lower Cretaceous: Burckhardt, 2.
northeastern: Böse, 5.
northern: Böse, 8; Hill, R. T., 5; Tatum, 1.
Panuco oil field: Baker, C. L., 8.
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southeastern: Honess, C. W., 6; Miser, 27; volcanic rocks: Miser, 19.
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Ontario, northern: Keele, 3, 4.
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Iniskin-Chinitna Peninsula: Moffit, 7.
Kantishna region: Capps, 1.
Kotsina-Kuskulana district: Moffit, 4.
Mesozoic: Martin, G. C., 15.
Point Barrow region: Paige, 5.
Ruby-Kuskokwim region: Mertie, 11.
York region: Steidtman, 4.
Alberta, Lake Minnewanka section: Shimer, 6.
Rocky Mountains: MacKenzie, J. D., 4.
southern and central: Slipper, 1.
southwestern: Stewart, J. S., 1.
Alberta and British Columbia, foothills belt: Hopkins, O. B., 4.
Appalachians, southern: Adams, G. I., 5.
Arizona. Aravaipa-Stanley region: Ross, C. P., 5.
Bright Angel quadrangle: Noble, 1.
Courtland-Gleeson region: Wilson, E. D., 2.
Jerome district, Yavapai County: Reber, 1; Smith, A. H. D., 1.
lower Gila region: Ross, C. P., 1.
northeastern, Holbrook area: Hager, D., 3.
Papago country: Bryan, 7, 15.
Payson district: Lausen, 1.
Ray quadrangle: Ransome, 11.
Ray-Miami region: Ransome, 1.

Geologic history—Continued.
Arizona—Continued.
Saddle Mountain and Banner mining district: Ross, C. P., 6.
San Carlos Indian Reservation: Schwennesen, 1.
Arkansas Hot Springs district: Purdue, 1.
Atlantic and Gulf Coastal Plain: Stephenson, 6.
Black Hills uplift: O'Harra, 5.
British Columbia: Brock, 4; Schofield, 15.
Ainsworth district: Schofield, 4.
Bridge River area: McCann, 3.
Cariboo district, Barkerville area: Johnston, W. A., 22.
Coquihalla area: Cairnes, 4.
Cordillera: Brock, 13.
Fraser River canyon: Camsell, 9.
Fraser River Delta: Johnston, W. A., 17.
Harrison Lake district: Crickmay, 5.
Kamloops district, North Thompson valley: Uglow, 3.
North Thompson Valley: Uglow, 11.
Purcell trench: Schofield, 6.
Rocky Mountain region: Schofield, 8.
Salmon River district: Schofield, 11.
Vancouver area: Schofield, 17.
California, Berkeley Hills: Fox, 1.
La Jolla quadrangle: Hanna, M. A., 3.
Los Angeles County, Baldwin Hills: Tieje, 6.
Paso Robles Basin: Reed, 6.
Petaluma, Point Reyes, and Santa Rosa quadrangles: Dickerson, 2.
Point Sur quadrangle: Trask, 5.
Randsburg quadrangle: Hulin, 3.
Salton Sea region: Brown, J. S., 3.
San Andreas rift: Noble, 9.
San Bernardino Mountains: Vaughan, F. E. 1.
San Diego County: Ellis, A. J., 1.
San Gabriel Mountains: Miller, W. J., 33.
Santa Barbara County, upper Santa Ynez River basin: Nelson, R. N., 1.
southern: Hill, R. T., 8.
Warner Range: Russell, R. J., 6.
Wheeler Ridge area, Kern County: Hoots, 5.
Canada: Collins, 10.
Great Plains: Hume, 25.
maritime provinces: Bell, W. A., 13.
Canadian Cordilleras: Dowling, 16.
Canadian Rockies: Burwash, 2, 3.
Canadian shield: Collins, W. H., 22.
Caribbean region: Vaughan, 3; Woodring, 23.
Cayman Islands: Matley, 14.
Central America: Sapper, 7; Vaughan, 3; and West Indies: Vaughan, 13.
Colorado, Big Thompson River valley: Fuller, M. B., 8.
central: Crawford, R. D., 2.
Geologic history—Continued.
Colorado—Continued.
Front Range: Van Tyul, 5.
Golden area: Johnson, J. H., 13.
Las Animas, Otero, and Bent counties (parts): Duce, 1.
Leadville mining district: Emmons, S. F., 1.
north central, foothills formations: Henderson, 2.
northwestern: Sears, 5.
San Juan Basin: Reeside, 8.
Tarryall district: Muilenburg, 2.
Twin Lakes district: Howell, J. V., 1.
Colorado Plateau region: Willis, 9.
Connecticut: Gregory, H. E., 8.
Southington-Granby area: Palmer, H. S., 5.
Cordillera in Canada: Schofield, 13.
Cordilleran region: Beeson, 1.
Cretaceous, Oklahoma and Arkansas: Miser, 27.
Utah: Spieker, 5.
Crustal deformation: Schuchert, 13.
Delaware, Wilmington quadrangle: Bascom, 2.
Dominican Republic: Vaughan, 16.
Eocene, southeastern North America: Berry, 51.
Finger Lakes: Fairchild, 20.
Florida: Cushman, 4.
General: Bretz, 12; Keith, 8; Merriam, 5.
Georgia, Cartersville district: Hull, 1.
Macon area: Cooke, C. W., 5.
Grand Canyon of the Colorado: Darton, 3.
Great Basin, Pleistocene history: Antevs, 5, 12.
Green River formation: Bradley, W. H., 3, 4.
Greenland: Böggild, 1, 6.
Gulf Coastal Plain: Stephenson, 12, 14.
Hawaii, Mauna Loa and Kilauea: Stearns, 8.
Idaho, Boise Basin: Ballard, 3.
Buffalo Hump district: Beckwith, 4.
Fort Hall Indian Reservation: Mansfield, G. R., 3.
Idaho batholith region: Beckwith, R. H., 1.
Mud Lake area: Stearns, 9.
Owyhee County, Bruneau River basin: Piper, 2.
St. Maries region: Anderson, A. L., 4.
Salmon River Mountains: Ross, C. P., 13.
Silver City district: Piper, 7.
southeastern: Mansfield, G. R., 11, 29.
Illinois: Cady, 6.
Carbondale quadrangle: Lamar, 3.
Carlyle-Centralia district: Shaw, 9.
Colchester and Macomb quadrangles: Hinds, H., 1,

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Illinois—Continued.
Dixon quadrangle: Knappen, 1.
east-central: Mylius, 7.
Edgington-Milan area: Savage, 5.
Elgin region, glacial history: Leighton, 14.
Gillespie and Mount Olive quadrangles: Lee, W., 1.
Glenwood beds: Bevan, 6.
Hennepin quadrangle: Cady, 3.
Herscher quadrangle: Athy, 1.
Joliet quadrangle: Fisher, D. J., 2.
Kings quadrangle: Bretz, 4.
La Harpe and Good Hope quadrangles: Savage, 8.
La Salle anticline: Mylius, 5.
La Salle quadrangle: Cady, 3.
Morris quadrangle: Culver, 2.
New Athens-Okawville area: Shaw, 8.
southern: Weller, 11, 15; Carboniferous: Weller, 11.
Indiana, Greene County, eastern: Malott, 1.
Iowa, Lake Calvin region: Schoewe, 6
Lucas County: Lugn, 6.
Mississippian: Van Tuyl, 8.
Kansas: Wooster, 2.
Cretaceous: Twenhofel, 17.
Hamilton County: Bass, 2.
Nemaha granite ridge: Moore, R. C., 32.
southeastern: Ley, 2.
Syracuse and Lakin quadrangles: Darton, 2.
western: Twenhofel, 6.
Kentucky, Berea region: Burroughs, W. G., 5.
Edmonson County: Weller, J. M., 1.
Knob region: Burroughs, W. G., 4.
Morgan County: Robinson, L. C., 1.
western coal field: Burroughs, W. G., 2.
Kilauea: Stone, J. B., 1.
Lake Erie region: Decker, C. E., 1.
Lake Lahontan: Jones, J. C., 2.
Lake Superior geosyncline, Hotchkiss, 8.
Lanai: Wentworth, 15.
Lesser Antilles: Earle, 8, 11.
Louisiana, Sabine uplift: Powers, 2.
Lower Cretaceous, Oklahoma and Texas: Bullard, 4.
Mackenzie River basin: Dowling, 15, 17.
Manitoba, Flinflon area: Alcock, 15.
northern: Bruce, 5.
pre-Cambrian: Alcock, 19.
Rice Lake and Oiseau River areas: Cooke, H. C., 9.
Maryland, Elkton quadrangle: Bascom, 2.
Kent County: Miller, B. L., 6.
Queen Annes County: Miller, B. L., 7.
Talbot County: Miller, B. L., 8.
Massachusetts, Boston area: Crosby, I. B., 5.
central, glacial history: Alden, 2.
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Connecticut Valley: Miller, W. J., 10.
Essex County: Clapp, C. H., 1.
Mesozoic, Alaska: Martin, G. C., 15.
southern North America: Stanton, 1.
Mesozoic floras of North and South America: Knowlton, 1.
Mexico: Lewis, S. J., 1.
Chapala region: Palmer, R. H., 1.
Cordillera: Fletcher, 1.
El Oro and Tlalpujahua districts: Flores, 1.
Hidalgo-Vera Cruz region: Palmer, R. H., 4.
Panuco oil field: Baker, C. L., 8.
Panuco River valley: Trager, 5.
Michigan, pre-Cambrian: Allen, R. C., 2.
Mid-Continent oil fields: Bosworth, 1; McCoy, 5.
Minnesota: Grout, 2; Meinzer, 11.
Herman, Barrett, Chokio, and Morris quadrangles: Sardeson, 1.
St. Louis County, northern: Grout, 20.
Mississippi Gulf, Eocene: Berry, 58.
Mississippi Valley, Missouri and Illinois: Krey, 2.
Pleistocene: Leverett, 8.
upper, late Paleozoic: Van Tuyl, 1.
Missouri, Ste. Genevieve County: Weller, 19.
Vernon County: Greene, 8.
Missouri River: Greene, 2.
Montana, Bearpaw Mountains: Reeves, F., 7.
Beartooth Mountains, Bevan, 2.
central, Upper Cretaceous: Bowen, C. F., 2.
Cretaceous: Hammer, 1.
Fergus County: Freeman, O. W., 1.
front ranges, Cenozoic history: Bevan, 9.
Quadrant formation: Hammer, 2.
Sweet Grass Hills: Kemp, 8.
Tullock Creek coal field: Rogers, G. S., 8.
Upper Cretaceous: Robinson, E. G., 1.
Nevada, Manhattan district: Ferguson, H. G., 5.
Muddy Mountains: Longwell, 1, 15.
Pioche district: Westgate, 6.
Rochester district: Knopf, A., 7.
Santa Fé district, Mineral County: Clark, C. W., 2.
New Brunswick, Moncton area: Wright, W. J., 2.
New Hampshire, White Mountains, North Conway quadrangle: Billings, 5.
New Mexico, Mogollon district: Ferguson, H. G., 3.
Raton-Brilliant-Koehler area: Lee, W. T., 6.
Sandia Mountains: Ellis, R. W., 2.
San Juan Basin: Reeside, 8.

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New Mexico—Continued.
Taos Range: Gruner, 1.
Tyrone district: Paige, 2.
New York: Miller, W. J., 23.
Adirondacks: Miller, W. J., 8; western: Agar, 1.
Canton quadrangle: Chadwick, 5.
Catskill region: Berkey, 6.
Genesee country: Fairchild, 15.
Genesee River region: Fairchild, 6.
Lake Clear region: Alling, H. L., 1.
Lake Placid quadrangle: Miller, W. J., 1.
Lyon Mountain quadrangle: Miller, W. J., 26.
Newburgh quadrangle: Holzwasser, 1.
physiographic history: Fairchild, 16.
Pleistocene: Fairchild, 9.
Schroon Lake quadrangle: Miller, W. J., 2.
Rochester, Pinnacle Hills, glacial history: Fairchild, 13.
West Point quadrangle: Berkey, 3.
North Atlantic Ocean, Tertiary history: Woodring, 8.
North Carolina: Bryson, 3.
Cretaceous: Stephenson, 4.
Nova Scotia, Northumberland Strait: Bell, W. A., 10.
Oahu: Wentworth, 22.
Ohio, Camp Sherman quadrangle: Hyde, 1.
Delaware County: Westgate, 5.
Oklahoma: Redfield, J. S., 1.
Arbuckle Mountains: Weidman, 3.
Beckham County: Gouin, 2.
Caddo and Grady counties: Becker, 1.
Carboniferous: Powers, 26.
Cimarron County: Rothrock, 4.
Crinerville oil field, Carter County: Powers, 22.
Kay, Grant, Garfield, and Noble counties: Clark, G. C., 3.
Rogers County: Woodruff, 4.
southern: Moore, R. C., 10.
southern Ouachita Mountains: Honess, C. W., 4.
Stonewall quadrangle: Morgan, G. D., 5, 6.
Thomas oil field, Kay County: Clark, S. K., 1.
Ontario, Arnprior-Quyon area: Wilson, M. E., 10.
Brocktown - Mallorytown area: Wright, J. F., 2.
English River valley: Bruce, 11.
Lake St. Joseph area: Bruce, 8.
Lake Timiskaming area: Hume, 14.
northeastern, physiographic history: Collins, W. H., 4.
Red Lake area, District of Patricia: Bruce, 12.
Red Lake Basin, District of Kenora: Bruce, 22.
Geologic history—Continued.
Ontario—Continued.
Sudbury district, Grassy River area: Gledhill, 5.
Sutton Lake area: Hawley, J. E., 1.
Timiskaming district, Redstone River area: Bruce, 19.
Ontario-Manitoba boundary: Burwash, 6.
Ordovician, Mississippi Valley: Dake, 8.
Oregon: Buwalda, 12: Smith, W. D., 9.
Cascade Plateau: Hodge, E. T., 5.
Mount Jefferson: Hodge, E. T., 6.
South Dakota, Keystone region: Landes, K. K., 6.
Lead area: Hosted, 1.
Newell quadrangle: Darton, 1.
Tennessee, Ducktown district: Emmons, W. H., 9.
Rutherford County: Galloway, J. J., 1.
western valley: Dunbar, 1.
Texas, Carboniferous: Powers, 26.
central: Matteson, 1.
Dallas County: Shuler, 1.
eastern: Dumble, 1.
Gulf Coastal Plain: Powers, 13.
Hockley salt dome, Harris County: Deussen, 2.
Lacasa area, Ranger district: Ross, C. S., 3.
north central: Plummer, 4; Pennsylvanian: Moore, R. C., 13.
Stratton Ridge salt dome: Applin, P. L., 1.
Tarrant County: Hill, E. A., 1.
trans-Pecos Texas: Baker, C. L., 6.
western: Baker, C. L., 2.
Triassic, southern Connecticut: Russell, W. L., 1.
Trinidad: Milner, 1; Waring, 6.
Naparima region: Illing, 1.
Uinta Mountains: Sears, 3.
Upper Cretaceous Mississippi Gulf: Berry, 10.
Utah: Schneider, H., 1.
Moab region: Baker, A. A., 1.
Tintic district: Lindgren, 2.
Wasatch Plateau: Spieker, 3.
Weber County: Pack, F. J., 2.
Vermont, Barre: Perkins, G. H., 4.
Bristol, Lincoln, and Warren townships: Gordon, C. E., 6.
central: Richardson, C. H., 1.
Green Mountain front: Bain, 24.
Northfield: Richardson, C. H., 2.
Pleistocene history: Fairchild, 2.
Oregon: Smith, W. D., 1.
Pleistocene: McCornack, 1.
Riddle quadrangle: Diller, 12.
southeastern: Smith, W. D., 14.
western: Harrison and Eaton, 1.
Oriskany formation: Fettke, 1.
Pacific region of Canada: Brock, 4.
Paleozoic, Atlantic-Arctic region: Holtedahl, 2.
Pebbles: Wentworth, 4.

Geologic history—Continued.
Pennsylvania, Cambrian and Ordovician: Miller, B. L., 11.
Piedmont region: Smith, I. F., 3.
Permian: Schuchert, 52; Great Plains: Dunbar, 4.
Piedmont area, Maryland and Pennsylvania: Stose, 18.
Porto Rico: Berkey, 1.
Coamo-Guayama district: Hodge, E. T., 1.
Humacao district: Fettke, 5.
Lares district: Hubbard, B., 3.
Ponce district: Mitchell, 7.
Pottsville formation: Fettke, 1.
Quebec, Arnprior-Quyon area: Wilson, M. E., 10.
Coleraine area: Knox, J. K., 1.
Gaspé Peninsula: Coleman, 7.
Mount Albert area: Alcock, 6.
northern: Cooke, H. C., 2.
Percé: Clarke, J. M., 20.
Port Daniel-Gascons area: Schuchert, 29.
St. Urbain area, Charlevoix district: Mawdsley, 1.
Timiskaming County, Opasatika area: Cooke, H. C., 10.
Rocky Mountains: Keyes, 16, 132, 162.
South Dakota, Black Hills region: Fillman, 3; O'Harra, 3; Yates, 1; central: Darton, 14.
Vermont, Whitingham area: Hubbard, G. D., 4.
Vermont region: Keith, 1.
Virgin Islands: Vaughan, 8.
Virginia, Giles County: Hubbard, G. D., 6.
Washington: Weaver, 1.
northeastern: Jenkins, 9.
San Juan Islands: McLellan, 2.
Spokane area: Pardee, 12.
Stevens County: Weaver, 2.
West Indies: Matthew, 5; Vaughan, 10; (part): Vaughan, 22.
West Virginia, Hampshire and Hardy counties: Tilton, 15.
Mercer, Monroe, and Summers counties: Reger, 9.
Mineral and Grant counties: Reger, 7.
White River beds, South Dakota: Wanless, 3.
Wisconsin River, Pleistocene: MacClintock, 1.
Wyoming, Big Horn Basin: Hewitt, 16.
southern: Sears, 5.
Yukon, southern: Cockfield, 9.
Geologic mapping, western United States: Vaughan, 12.
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Alabama: Smith, E. A., 2, 5; (part): Brantley, 1.
Ashland graphite area: Brown, J. S., 6.
Bessemer-Vandiver quadrangle: Butts, 13.
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Alabama—Continued.
Clay County: Prouty, 10.
northern: Semmes, 3.
Alaska, Alaska Peninsula: Martin, G. C., 8.
Alaska Railroad region: Capps, 6.
Anvik-Andreafski region: Harrington, 1.
Canyon Creek: Overbeck, 2.
Chandalar district: Mertie, 12.
Chichagof Island, west coast: Buddington, 8; Overbeck, 1.
Chignik region: Martin, G. C., 13.
Chulitna region: Capps, 6; upper: Capps, 4.
Cold Bay district: Capps, 5.
Cold Bay oil field: Martin, G. C., 8.
Cold Bay-Chignik district: Smith, W. R., 1.
Cold Bay-Katmai district: Smith, W. R., 3.
Controller Bay or Katalla oil field: Martin, G. C., 8.
Cook Inlet oil fields: Martin, G. C., 8.
Elephant Mountain: Smith, W. R., 1.
Goodnews Bay region: Harrington, 6.
Hyder district: Buddington, 8.
Iniskin Bay district: Moffit, 3.
Iniskin-Chinitna Peninsula: Moffit, 7.
Innoko-Iditarod region: Mertie, 11.
Jack Bay district: Johnson, B. L., 2.
Kahiltna Valley: Mertie, 2.
Kamishak Bay region: Mather, 7.
Kantishna district: Capps, 6.
Kejulik Valley: Smith, W. R., 1.
Kenai Peninsula, southwestern part: Gill, A. C., 2.
Kennecott: Bateman, 10.
Kiwalik-Koyuk region: Harrington, 5.
Knik-Matanuska district: Landes, K. K., 2.
Kotsina-Kuskulana district: Moffit, 4.
Marshall mining district: Harrington, 1.
mineral resources: Brooks, 2.
Nenana coal field: Martin, G. C., 1, 10.
Nenana-Kantishna region: Capps, 1.
Nixon Fork country: Brown, J. S. 7.
Nixon Fork district, Kuskokwim basin: Martin, G. C., 9.
northwestern Arctic: Smith, P. S., 7.
Pearl Creek Dome and Mount Peulik: Smith, W. R., 1.
Porcupine district: Eakin, 1.
Ruby district: Mertie, 11.
Salmon River district: Westgate, 2.
Sheenjek River district: Mertie, 16.
Snug Harbor district: Moffitt, 7.
southeastern: Burchard, 6.
Talkeetna Mountains: Capps, 6; western: Capps, 3.

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Toklat-Tonzona River region: Capps, 12.
Tolstoi district: Harrington, 2.
Tuxedni Bay area: Moffit, 2.
upper Matanuska Valley: Capps, 11.
Wide Bay: Smith, W. R., 1.
Wrangell district: Buddington, 4.
York region: Steidtman, 4.
Alberta: Allan, 14.
area between Athabaska and Embarras Rivers: Rutherford, 5.
Banff area: Warren, P. S., 4.
Battle River: Hume, 20.
Blackstone, Brazeau, and Pembina rivers foothills belt: Allan, 13.
Bow River between Cochrane and Kananaskis: Rutherford, 6.
Drumheller district: Allan, 7.
foothills belt between McLeod and Athabaska Rivers: Rutherford, 4.
North Saskatchewan and McLeod Rivers: Rutherford, 8.
Ribstone Valley: Dowling, 5.
Saunders Creek and Nordegg coal basins: Allan, 9.
southern: Stewart, J. S., 1; artesian area: Dowling, 19.
Turner Valley: McLearn, 14.
Turner Valley oil area: Hume, 22.
Wainwright-Vermilion area: Hume, 19.
Appalachian region: Keith, 2.
Arctic Canada, Baffin Island, Cumberland Sound area: Weeks, L. J., 3.
Arctic regions, Ellesmere Land: Holtedahl, 1.
Arizona: Arizona Bur. Mines, 1; Darton, 13.
Aravaipa-Stanley region: Ross, C. P., 5.
Banner mining district: Ross, C. P., 6.
Bisbee district: Jones, Ed. L., 6.
Black Mesa: Reagan, 15.
Bradshaw Mountains quadrangle: Lindgren, 17.
Cave Creek district: Lewis, A. S., 1.
central: Ettlinger, 1.
Christmas area: Ross, C. P., 6.
Courtland-Gleeson region: Wilson, E. D., 2.
Gila region, lower: Ross, C. P., 1.
Globe-Ray region: Ransome, 1.
Grand Canyon: Darton, 12.
Hopi Buttes volcanic field: Reagan, 8.
Jerome district, Yavapai County: Reber, 1.
Jerome quadrangle: Lindgren, 17.
Lees Ferry region: Bryan, 11.
Mazatzal Peak region: Wilson, E. D., 1.
Miami district: Ransome, 1.
Oatman district: Ransome, 12.
Papago country: Bryan, 7.
Payson district: Lausen, 1.
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Arizona—Continued.
Ray district: Ransome, 1.
Ray quadrangle: Ransome, 11.
San Carlos Indian Reservation: Schwennesen, 1.
Superior district: Short, 1.
Tombstone district: Jones, Ed. L., 6.
Tucson and Amole Mountains: Jenkins, 3.
Verde formation: Jenkins, 6.
Virgin Mountains: Darton, 16.
Arkansas: Branner, G. C., 3; Ferguson, J. G., 1.
Batesville district: Miser, 5, 8.
Hot Springs district: Purdue, 1.
Pike County, peridotite area: Miser, 10, 18; Prairie Creek area: Miser, 12.
Pike, Howard, and Hempstead counties (parts): Miser, 12.
southwestern: Ellisor, 2.
Atlantic and Gulf Coastal Plain: Stephenson, 6.
Black Hills region: O'Harra, 3.
British Columbia: Brock, 4; Schofield, 3.
Ainsworth district: Schofield, 4.
Atlin-Telegraph Creek, Cassiar district: Cockfield, 18.
Bridge River, Lillooet district: McCann, 3.
Cariboo district, Barkerville area: Johnston, W. A., 22.
Cassiar district, Devils Elbow Mountain: Kerr, F. A., 2.
Chilko Lake area: Dolmage, 15.
coast and islands: Dolmage, 8; between Campania Sound and Port Simpson: Dolmage, 9; between Port Simpson and Stewart: Dolmage, 9.
Copper Mountain: Camsell, 4.
Dease Lake area, Cassiar district: Kerr, F. A., 1.
Dewdney Trail: Cairnes, 2.
Driftwood Creek area, Babine Mountains: Hanson, 9.
Eutsuk Lake area, Coast district: Marshall, J. R., 3.
Finlay River district: Dolmage, 17.
Fraser River Delta: Johnston, W. A., 17.
Hazleton: O'Neill, 1.
Hope Mountain: Cairnes, 2.
Hudson Bay Mountain, Coast district: Jones, R. H., 1.
Kamloops district, North Thompson valley: Uglow, 3.
Kettle Valley: Cairnes, 2.
Kitsault River to Skeena River: Hanson, 3.
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Kootenay district (part): Walker, J. F., 2.
Lakelse Lake area: Marshall, J. R., 5.

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Lasqueti Island: MacKenzie, J. D., 3.
Parson Bay: Crickmay, 9.
Peace River canyon area: McLearn, 7.
Peace River district: Spieker, 1.
Pemberton area, Lillooet district: Cairnes, 8.
Purcell trench: Schofield, 6.
Rocky Mountain trench: Shepard, 11.
Salmon River district: Schofield, 14.
southeastern: Walker, J. F., 1.
Taseko Lake-French Bar Creek: MacKenzie, J. D., 2.
Taseko Valley: MacKenzie, J. D., 1.
Tatla-Bella Coola area: Dolmage, 16.
Vancouver Island, Alberni area: MacKenzie, 7; East Sooke Peninsula: Cooke, H. C., 5; Sunloch district: Dolmage, 3.
Whitesail-Tahtsa lakes area: Marshall, J. R., 3.
Windermere area, Kootenay district: Walker, J. F., 1.
Yale district, Silver Creek, Skagit and Similkameen rivers: Cairnes, 5.
Tulameen area: Poitevin, 6.
Zymoetz River area, Coast district: Hanson, 11.
British Honduras: Ower, 1.
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Capistrano area: Woodford, 3.
Cuyamaca region: Hudson, F. S., 1.
Deep Spring Valley: Miller, W. J., 35.
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Eocene north of Mt. Diablo: Clark, B. L., 18.
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Humboldt County, southwestern: Hoots, 7; U. S. G. S., 19.
Kern County: English, W. A., 1.
La Jolla quadrangle: Hanna, M. A., 3.
Los Angeles Basin: Eaton, J. E., 3.
Point Reyes quadrangle: Dickerson, 2.
Point Sur quadrangle: Trask, 4.
Puente Hills region: English, W. A., 3.
Randsburg quadrangle: Hulin, 3.
Richfield oil field: Musser, 3.
Salton Basin: Brown, J. S., 1, 3.
San Bernardino County (part): Eckis, 1.
San Bernardino Mountains: Vaughan, F. E., 1.
San Diego County: Ellis, A. J., 1.
San Jacinto and Temecula basins: Waring, 1.
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Santa Barbara County, Santa Ynez River district: Kew, 2; Nelson, R. N., 1.
Santa Clara Valley: Reinhard, 1.
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Santa Rosa and Petaluma quadrangles: Dickerson, 2.
Santa Rosa Island: Kew, 10.
Simi Valley: Kew, 1.
Siskiyou County, Salmon River district: Logan, C. A., 1.
Sonora quadrangle: Benson, W. N., 2.
southern coast (part): Woodford, 3.
Sunset-Midway field: Pack, R. W., 1.
Tejon region: Anderson, F. M., 1.
Ventura Basin: Eaton, J. E., 4.
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Warner Range: Russell, R. J., 6.
Cambrian: Schuchert, 25.
Canada: Graham, R. P. D., 2.
central Arctic coast: O'Neill, 5.
eastern: Brock, 11; Graham, R. P. D., 3.
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Coal fields: U. S. G. S., 1.
Colorado: George, R. D., 6; (part): Campbell, M. R., 3.
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Canyon City area: Osborn, 10.
Catlin quadrangle: Toepelman, 3.
Creede district: Emmons, W. H., 4.
De Beque oil field: Winchester, 5.
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Grand, Jackson, and Larimer counties (parts): Spock, 1.
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Italian Mountain, Gunnison County: Cross, W., 7.
La Junta area: Patton, H. B., 3.
Las Animas, Otero, and Bent counties (parts): Duce, 1.
Leadville mining district: Emmons S. F., 1; Loughlin, 31.
Mancos district: Collier, 3.
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Glastonbury area: Palmer, H. S., 4.
Meriden area: Waring, 2.
New Haven area: Brown, J. S., 9.
New Haven coast: Brown, J. S., 5.
Norwalk area: Palmer, H. S., 4.
Shepaug Aqueduct Tunnel area: Agar, 4.
southern (part): Russell, W. L., 1.
Southington-Granby area: Palmer, H. S., 5.
Stonington region: Martin, L. H., 1.
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Cretaceous deposits, eastern Gulf region: Berry, 3.
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Boise Basin: Ballard, 3.
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Buffalo Hump district: Beckwith, R. H., 1, 4.
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Cassia County, Goose Creek basin: Piper, 1.
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De Lamar district: Piper, 6.
eastern: Mansfield, G. R., 8.
Flint mining district: Piper, 6.
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Hell Creek, Fall Creek, Palisade Creek, McKoy Creek, Grays Lake, and Cranes Flat quadrangles: Kirkham, 3.
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Allen County: Miller, A. M., 5; Shaw, E. W., 1.
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Jackson Purchase region: Jillson, 28.
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Knott County: Jillson, 13; structural geology: Ky. G. S., 2.
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McLean County, economic: Ky. G. S., 17.
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Philipsburg phosphate field: Pardee, 6.
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Richmond County, Stirling area: Weeks, L. J., 1.
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Coeur d'Alene district: Berg, 1; Eby, J. H., 1; Umpleby, 3, 5; Waldschmidt, 8.
Copper near Salmon: Ross, C. P., 3, 7.
Seven Devils district: Livingston, 3.
Disseminated lead prospect, Boise County: Ross, C. P., 10.
General: Bell, R. N., 5.
Glacially transported mine, Gilmore: Walker, R. T., 1.
Gold, Boise Basin: Ballard, 3.
Idaho batholith: Thomson, F. A., 4.
north central Idaho: Thomson, F. A., 3.
Idaho—Continued.
Economic geology—Continued.
Gold, silver, copper, lead, and zinc: Gerry, 1, 3, 5, 8, 10, 13.
Gold veins, central Idaho: Roberts, H. M., 1.
Gypsum: Stone, 11.
Horseshoe Basin coal field: Evans, G. W., 4.
I. X. L. copper prospect, Adams County: Bell, R. N., 3.
Kaolin and feldspar: Wilson, H., 1.
Manganese: Livingston, 2.
Bannock County: Hewett, 19.
Mica deposits, Latah County: Anderson, A. L., 1.
Mineral and Cuddy Mountain mining districts, Washington and Adams counties: Livingston, 4.
Mining districts: Varley, 1.
Mining industry: Bell, R. N., 1, 2, 4; Campbell, S., 1, 3–7.
Molybdenite, Rocky Bar district: Schrader, 7.
Molybdenum: Livingston, 2.
Native lead, Hailey: Shannon, 73.
Oil shale: Condit, 2; Winchester, 5.
Oil possibilities: Heald, 10.
Bingham, Bonneville, and Caribou Counties: Kirkham, 3.
southeastern Idaho: Kirkham, 1, 5.
southwestern and south-central Idaho: Buwalda, 5.
Ore deposition, Buffalo Hump district: Beckwith, R. H., 3.
Ore deposits in Tertiary lava, Salmon River Mountains: Ross, C. P., 13.
Phosphate deposits: Kirkham, 4; Mansfield, G. R., 35.
Quartzburg, Gold Hill mine: McDermid, 1.
Quicksilver: Livingston, 2.
Rocky Bar quadrangle: Ballard, 4.
Salt deposits: Phalen, 1.
Shoshone County: Umpleby, 3.
Silver, Pend Oreille district: Sampson, 16.
Silver City region: Piper, 6, 7.
South-central Idaho: Umpleby, 2.
Tin: Livingston, 2.
Tungsten: Livingston, 2.
Vienna district, Blaine County: Ross, C. P., 12.
Wood River district: Campbell, S. S.,
Yellow Pine cinnabar district: Larsen, 3
Zonal distribution of gold, silver, lead, and copper ores: Thomson, F. A., 6.
Historical geology.
Bozeman beds: Keyes, 19.
Buffalo Hump district: Beckwith, R. H., 1, 4.
Coeur d'Alene region: Eby, J. H., 1; Shannon, 14.
Eastern Idaho: Mansfield, G. R., 8.

Idaho—Continued.
Historical geology—Continued.
Granitic rocks, age: Ross, C. P., 16.
Igneous geology, southeastern Idaho: Mansfield, G. R., 10.
Mud Lake Basin: Stearns, 4, 6.
Paleozoic: Ross, C. P., 11.
Payette formation, age: Buwalda, 8.
Pend Oreille district: Sampson, 16.
Potlatch area: Kirkham, 10.
Richmond formation(?): Cook, C. W., 8.
Rocky Bar district: Schrader, 7.
St. Maries area: Kirkham, 8.
Silver City district: Piper, 7.
Snake River valley: Buwalda, 3.
South-central Idaho: Ross, C. P., 15; Umpleby, 2.
Southeastern Idaho: Kirkham, 5; Mansfield, G. R., 30; Triassic and Jurassic: Mansfield, G. R., 6.
Vienna district, Blaine County: Ross, C. P., 12.
Wasatch and Salt Lake formations, southeastern Idaho: Mansfield, G. R., 5.
Yellow Pine district, Valley County: Schrader, 10.
Mineralogy.
Amphibole similar to hudsonite, Custer County: Shannon, 49.
Anglesite, Coeur d'Alene district: Shannon, 2, 17.
Atlanta district: Shannon, 79.
Black sands: Shannon, 25.
Boulangerite, Blaine county: Shannon, 28; Mullan: Shannon, 19.
Brannerite, Stanley Basin: Hess, 6.
Calcite, Pioneerville district: Shannon, 17.
Calcite oolites of pentagonal dodecahedral form, Eagle Rock: Shannon, 69.
Ferroanthophyllite, Coeur d'Alene district: Shannon, 21.
Galenobismutite, Boise County: Shannon, 30.
Garnet: Shannon, 39.
Gersdorffite: Shannon, 47.
Gouge clays, mineralogy: Shannon, 35.
Hisingerite, Blaine County: Hewett, 14.
Jamesonite containing silver, Owyhee County: Shannon, 19.
Slate Creek, Custer County: Shannon, 57.
Linarite and leadhillite, Wardner: Shannon, 5.
Ludwigite, Lemhi County: Shannon, 24.
Meteorite, Oakley: Merrill, 47, 52.
Miargyrite and tetrahedrite, Flint district: Shannon, 78.
Minerals: Shannon, 61.
Mordenite and associated minerals, Challis, Custer County: Ross, C. S., 6.
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Mineralogy—Continued.
Naumannite, Silver City district: Shannon, 20.
Native lead, Hailey: Shannon, 73.
Niter deposit, Dubois: Stearns, H. T., 2.
Owyheeite, Owyhee: Shannon, 27.
Tetradymite, Hailey quadrangle: Shannon, 58; Pine Creek district: Shannon, 17.
Trichalcite, Shoshone County: Shannon, 34.
Tridymite and cristobalite in a granitic xenolith: Weymouth, 2.
Vanadinite, Lembi County: Stearns, H. T., 1.
Vivianite, Clearwater County: Shannon, 22.
Xanthoconite, Atlanta district: Shannon, 79.
Zeophyllite, Salmon River district: Fairbanks, 9.
Zircon, occurrence, Pend Oreille: Gillson, 36.
Paleontology.
Carboniferous and Triassic, southeastern Idaho: Girty, 10.
Idaho formation, Snake River valley: Dall, 10.
Orygoceras, Tertiary: Dall, 7.
Payette flora: Chaney, 6.
Petrology.
Coeur d'Alene district: Shannon, 14.
Granitic rocks, age: Ross, C. P., 16.
Granodiorites, Pend Oreille district: Gillson, 6.
Idaho batholith: Beckwith, R. H., 1.
Southeastern Idaho: Mansfield, 10.
Physical geology.
Asotin craters of Columbia River basalt: Fuller, R. E., 3.
Craters of the Moon National Monument: Stearns, H. T., 14.
Faulting, northern Idaho: Umpleby, 3.
Fissure eruption, western Idaho: Fuller, R. E., 2.
Mud Lake basin, igneous geology: Stearns, 4.
Osburn fault: Umpleby, 5.
Rate of soil deposition, Palouse area: Peterson, P. P., 1.
Rocky Mountain structure, southeastern Idaho: Mansfield, G. R., 4, 15.
Southeastern Idaho: Mansfield, G. R., 11, 33.
Volcanism, Mud Lake area: Stearns, 9.
Physiographic geology.
Craters of the Moon: Stearns, H. T., 12; Stearns, N. D., 3.
National Monument: Stearns, H. T., 3, 14.
Drainage changes, northern Idaho: Anderson, A. L., 2.
Features of glacial origin: Davis, W. M., 3.

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Idaho peneplain, age: Buwalda, 8.
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Southeastern Idaho: Mansfield, 13, 22, 23.
Tertiary planation, central Idaho: Mansfield, 19; Ross, C. P., 8.
Underground water.
Big Lost River valley: Kirkham, 12.
Camas Creek Basin: Piper, 4.
Goose Creek basin, Cassia County: Piper, 1.
Idaho Falls: Piper, 5.
Lapwai area: Kirkham, 11.
Moscow: Laney, 1.
Mud Lake basin: Stearns, 6.
Orofino area: Kirkham, 11.
Pahsimeroi Valley: Meinzer, 8.
Potlatch area: Kirkham, 10.
Thermal springs: Meinzer, 10.
St. Maries area: Kirkham, 8.
Weiser area: Kirkham, 12.
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Aa and pahoehoe, formation: Washington, 23.
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Ashland graphite area: Brown, J. S., 6.
Clay County: Prouty, 10.
Alaska: Martin, G. C., 15.
Alaska Railroad region: Capps, 6.
Anvik-Andreafski region: Harrington, 1.
Chandalar district: Mertie, 12.
Chicagof Island: Buddington, 8; western part: Overbeck, 1.
Coast Range intrusives: Buddington, 14.
Cold Bay district: Capps, 5.
Cold Bay-Chignik district: Smith, W. R., 1.
Cold Bay-Katmai district: Smith, W. R., 3.
Goodnews Bay region: Harrington, 6.
Kahiltna Valley: Mertie, 2.
Kamishak Bay region: Mather, 7.
Katmai region: Fenner, 8.
Kennecott: Bateman, 3.
Kiwalik-Koyuk region: Harrington, 5.
Knik-Matanuska district: Landes, K. K., 2.
Kotsina-Kuskulana district: Moffit, 4.
Nixon Fork country: Brown, J. S., 7.
northern, Canning River region: Leffingwell, 1.
Porcupine district: Eakin, 1.
Ruby-Kuskokwim region: Mertie, 11.
Salmon-Unuk River region: Mertie, 6.
Igneous and volcanic rocks—Continued.
Alaska—Continued.
southeastern: Buddington, 13; submarine pillow lavas: Buddington, 10.
Talkeetna Mountains, western: Capps, 3.
Tolstoi district: Harrington, 2.
Toklat-Tonzona River region: Capps, 12.
Tuxedni Bay area: Moffit, 2.
upper Matanuska Valley: Mertie, 14.
Anorthosites, formation: Loewinson-Lessing, 1.
Arizona: Darton, 17.
Aravaipa-Stanley region: Ross, C. P., 5.
central: Ettlinger, 1.
Courtland-Gleeson region: Wilson, E. D., 2.
Jerome and Bradshaw Mountains quadrangles: Lindgren, 17.
Jerome district, Yavapai County: Fearing, J. L., 2; Reber, 1.
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Oatman district: Ransome, 12.
Papago country: Bryan, 7, 15.
Payson district: Lausen, 1.
Ray quadrangle: Ransome, 11.
Ray-Miami region: Ransome, 1.
Saddle Mountain and Banner mining districts: Ross, C. P., 6.
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Arkansas, Hot Springs district: Lloyd, E. R., 2.
Pike County, peridotite: Miser, 12.
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Belcher Islands, Hudson Bay: Moore, E. S., 1.
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Ainsworth district: Schofield, 4.
Bridge River area: McCann, 3.
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Cariboo district, Barkerville area: Johnston, W. A., 22.
Chiko Lake area: Dolmage, 15.
Coquihalla area: Cairnes, 4.
Dease Lake area, Cassiar district: Kerr, F. A., 1.
Driftwood Creek area, Babine Mountains: Hanson, 9.
Emory Creek, Yale district: Cairnes, 9.
Eutsuk Lake area, Coast district: Marshall, J. R., 3.

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Eutsuk Lake district: Brock, 1.
Fraser River Delta: Johnston, W. A., 17.
Kamloops district, North Thompson valley: Uglow, 3.
Lasqueti Island: MacKenzie, J. D., 3.
Milbank Sound region, post-Pleistocene volcanics: Dolmage, 10.
Parson Bay: Crickmay, 1.
Pemberton area, Lillooet district: Cairnes, 8.
Prince Rupert to Burns Lake: Hanson, 10.
Salmon River district: Schofield, 11.
Texada Island: Swanson, C. O., 2.
Vancouver area: Schofield, 17.
Vancouver Island, East Sooke Peninsula: Cooke, H. C., 5.
Whitesail-Tahtsa lakes area: Marshall, J. R., 3.
Windermere area, Kootenay district: Walker, J. F., 1.
Yale district: Cairnes, 5.
British Honduras: Ower, 2, 3.
British Virgin Islands: Earle, 5.
California, Blackhawk Canyon, San Bernardino Mountains: Woodford, 7.
Deep Spring Valley: Miller, W. J., 35.
Hollywood Hills, near Los Angeles: Schürmann, 1.
La Jolla quadrangle: Hanna, M. A., 3.
Lassen Peak region: Williams, H., 1.
Los Angeles and Ventura counties: Kew, 6.
Point Sur quadrangle: Trask, 5.
Randsburg quadrangle: Hulin, 3.
Sacramento Valley: Bryan, 10.
San Bernardino Mountains: Vaughan, F. E., 1.
San Diego County: Ellis, A. J., 1.
San Gabriel Mountain: Miller, W. J., 29.
Sierra Nevada, inclusions in granitic rocks: Pabst, 1.
Sunset-Midway field: Pack, R. W., 1.
Warner Range: Russell, R. J., 6.
Central America: Putnam, P. C., 2.
Classification: Hodge, E. T., 2, 3, 7, 9; Johannsen, 3; Loughlin, 33; Pirsson, 4.
Colorado, Boulder County, Ward region: Worcester, 1.
central: Crawford, R. D., 2.
Creede district: Emmons, W. H., 4.
Delta and Mesa counties: Weeks, H. J., 1.
Golden area: Johnson, J. H., 14.
Grand, Jackson, and Larimer counties (parts): Spock, 1.
Gunnison River: Hunter, J. F., 1.
Las Animas, Otero, and Bent counties (parts): Duce, 1.
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Leadville mining district: Emmons, S. F., 1.
Monument Butte quadrangle: Hancock, 7.
northwestern: Ross, C. S., 14.
Pitkin County, Aspen district: Knopf, A., 10.
Platoro-Summitville district: Patton, H. B., 1.
Red Cliff district: Crawford, R. D., 3.
Routt and Moffat counties: Perini, 1.
Routt County: Crawford, R. D., 1.
southwestern: Coffin, 3.
Tarryall district, Park County: Muilenburg, 2.
Twin Lakes district: Howell, J. V., 1.
Columbia River basalt, Asotin craters: Fuller, R. E., 3.
Composition, texture, classification, description, and occurrence; Iddings, 2.
Connecticut, Middletown area: Rice, W. N., 1.
Shepaug Aqueduct Tunnel area: Agar, 4.
Southampton-Granby area: Palmer, H. S., 5.
Stonington region: Martin, L. H., 1.
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General: Washington, 4.
Georgia, Tate quadrangle: Bayley, 13.
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Hawaiian Islands: Powers, 5.
Kaula, Nihoa, Necker, and Gardner islands: Palmer, H. S., 9.
Kilauea: Stone, J. B., 1.
Honduras: Redfield, 8.
Idaho, Bingham, Bonneville, and Caribou counties: Kirkham, 3.
Boundary County: Kirkham, 7.
Buffalo Hump district: Beckwith, 4.
Camas Creek basin: Piper, 4.

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Idaho—Continued.
Cassia County, Goose Creek basin: Piper, 1.
Coeur d'Alene district: Shannon, 14.
Craters of the Moon National Monument: Stearns, H. T., 14.
Fort Hall Indian Reservation: Mansfield, G. R., 3.
granitic rocks: Ross, C. P., 16.
Idaho batholith: Beckwith, R. H., 1.
Lapwai area: Kirkham, 11.
Mineral and Cuddy Mountain mining districts: Livingston, 4.
Mud Lake area: Stearns, 9.
north central: Thomson, F. A., 3.
Orofino area: Kirkham, 11.
Owyhee County, South Mountain district: Sorenson, 1.
Pend Oreille district, granodiorites: Gillson, 6.
Pine Creek district: Jones, Edw. L., 4.
Rocky Bar quadrangle: Ballard, 4.
Salmon River Mountains: Ross, C. P., 13.
Seven Devils district: Livingston, 3.
Shoshone County: Umpleby, 3.
Silver City region: Piper, 6.
south central: Umpleby, 2.
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Igneous intrusion, after-effects: Kemp, 12.
Illinois, Hardin County: Weller, S., 1.
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Intrusive Triassic diabase, Goose Creek, Loudoun County: Shannon, 46.
Kansas, Riley County: Moore, R. C., 7.
Rose dome, Woodson County: Twenhofel, 23, 32.
Kentucky, Cave in Rock quadrangle: Weller, 16.
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Lanai: Wentworth, 15.
Leeward Islands: Washington, 33.
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Louisiana, Cretaceous: Bramlette, 2.
Richland Parish, nepheline basalt: Campbell, I., 1.
Magmatic differentiation: Vogt, 1, 3.
Maine, Kennebec River to Penobscot Bay: Perkins, E. H., 3.
Mount Desert Island: Bascom, 1.
Mount Kineo: Smith, E. S. C., 3.
Ogunquit: Keeley, 2.
Portsmouth Basin: Wandke, 2.
Manitoba, Beresford Lake area: Wright, D. G. H., 2; Wright, J. F., 4.
Bigstone and Fox Rivers area: Merritt, C. A., 4.
Cross-Pipestone area: Alcock, 4.
Flinflon area: Alcock, 15.
Island Lake area: Wright, J. F., 12.
Igneous and volcanic rocks—Continued.
Manitoba—Continued.
Knee Lake district: Bruce, 4.
northern: Bruce, 5.
Oiseau River area: Wright, J. F., 10.
Oxford and Knee Lakes area: Wright, J. F., 11.
Reed and Wekusko lakes region: Alcock, 3.
Rice Lakes area: Wright, J. F., 3.
Maryland, Elkton quadrangle: Bascom, 2.
Harford County, serpentines; Johannsen, 14.
western Piedmont: Jonas, 4.
Massachusetts, Cape Ann: Warren, C. H., 2.
Dracut norite stock: Fairbanks, 10.
Essex County: Clapp, C. H., 1.
Westfield, gabbroid diabase: Shannon, 6.
Mexico, Aguascalientes, Asientos-Tepezala district: Anderson, G. E., 2.
Chapala region: Palmer, R. H., 1.
Chihuahua, Yoquivo district: Hall. C. W., 1.
Coahuila, northern: Cummings, 2.
Colima (part): Vivar, 4.
El Oro and Tlalpujahua districts: Flores, 1.
Guanajuato mining district: Wandke, 8.
Guerrero: Bonillas, 1; Paredes, 1; Zumpango del Rio: Waitz, 2.
Hidalgo, Atotonilco el Grande: Wittich, 10; El Chico: Wittich, 9.
Hidalgo-Vera Cruz region: Palmer, R. H., 4.
Lower California: Gâlvez, 2; La Purisima region: Heim, 1; southern: Gâlvez, 7.
Michoacan, Morelia Valley: Camacho, 3.
Minillas, Cerro Prieto, Pichagua, and Sierra de Ramírez: Bonillas, 2.
northeastern: Staub, 1.
Panuco oil field: Baker, C. L., 8.
Puebla, San Juan de los Llanos: Wittich, 12.
San Quintin volcanic field: Woodford, 6.
Michigan, Presque Isle, peridotite: Creveling, 1.
Minnesota, Cook County, sulphide diabase: Schwartz, 12.
Giants Range batholith: Allison, I. S., 1.
granite and gabbro intrusions of Ely greenstone: Schwartz, 7.
Gunflint district: Broderick, 3.
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Melrose phosphate field: Richards, R. W., 2.
Sweet Grass Hills: Kemp, 8.
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Nevada, Candelaria district: Knopf, A., 5.
Divide district: Knopf, A., 3.
Gilbert district: Ferguson, H. G., 10.
Jarbidge district: Schrader, 5.
Manhattan district: Ferguson, H. G., 2, 5.
Mineral County, Cedar Mountain: Knopf, A., 4.
Pioche district: Westgate, 6.
Rochester district: Knopf, A., 7.
Round Mountain district: Ferguson, H. G., 4.
Santa Fe district, Mineral County: Clark, C. W., 2.
New Brunswick, Burnthill Brook area: Young, G. A., 1.
Dalhousie area: Howard, W. V., 2.
Newfoundland, Notre Dame Bay: Sampson, 8.
southeastern: Buddington, 3.
west coast: Brunton, 3.
New Hampshire, Ammonoosuc district: Ross, C. P., 2.
Hanover district: Merritt, J. W., 3.
Portsmouth Basin: Wandke, 2.
White Mountains, North Conway quadrangle: Billings, 5.
New Jersey, Beemerville: Aurousseau, 1.
New Mexico: Darton, 26.
Mogollon district: Ferguson, H. G., 3, 8; Scott, D. B., 1.
northeastern: Garrett, 1.
Pecos Valley: Semmes, 4.
Puertecito district: Wells, E. H., 2.
Raton-Brilliant-Koebler area: Mertie, 9.
Sandia Mountains: Ellis, R. W., 2.
Taos Range: Gruner, 1.
Taylor Creek district: Hill, J. M., 3.
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New York, Adirondack gabbros: Gillson, 10.
Adirondacks: Alling, 3.
Ausable quadrangle: Kemp, 23.
Gouverneur quadrangle: Cushing, 1.
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Lake Bonaparte quadrangle: Smyth, 2.
Lake Clear region: Alling, H. L., 1.
Lewis County: Buddington, 2.
Luzerne quadrangle: Miller, W. J., 19.
Lyon Mountain quadrangle: Miller, W. J., 26.
Mount Marcy quadrangle: Kemp, 7.
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West Point quadrangle: Berkey, 3.
North Carolina, Deep River region: Stuckey, 1.
Nova Scotia, North Mountain, Cape Breton: Guernsey, 2.
Richmond County, Stirling area: Weeks, L. J., 1.
Oahu: Wentworth, 22.
Oklahoma: Gould, 9.
Arbuckle Mountains: Taff, 7.
Cimarron County: Rothrock, 4; Black Mesa basalt: Shead, 5.
southern Ouachita Mountains: Honess, C. W., 4.
Wichita Mountains: Taff, 7.
Olivine bombs near Globe, Arizona: Lausen, 5.
Ontario, Batchawana area, District of Algoma: Moore, E. S., 19.
Brocktown-Mallorytown area: Wright, J. F., 2.
Cochrane district: Hawley, J. E., 3.
Kirkland Lake area: Burrows, 4, 12; Todd, 8; Lebel and Gauthier townships: Hopkins, 7.
Lake St. Joseph area: Bruce, 8.
Matabitchuan area: Todd, E. W., 5.
Matachewan district: Cooke, H. C., 1.
Michipicoten district: Collins, W. H., 1, 15.
Missinaibi area: Thomson, E., 11.
north shore of Lake Huron: Collins, 11.
Red Lake area: District of Patricia: Bruce, 12.
Red Lake gold area, District of Kenora: Bruce, 22.
Sault Ste. Marie, District of Algoma: McConnell, 1.
Sudbury district: Bain, 5, 18; Phemister, 4.
Sutton Lake area: Hawley, J. E., 1.
Timiskaming district, Abitibi-Night Hawk gold area: Knight, C. W., 1; Argonaut mine: Cooke, H. C., 13; Larder Lake area: Cooke, 11; Redstone River area: Bruce, 19.
Oregon: Smith, W. D., 1.
Cornucopia, inclusions in porphyry dikes: Goodspeed, 1.
Glass Buttes, Lake County: Waters, A., 2.
Mount Jefferson: Hodge, E. T., 6.
Riddle quadrangle: Diller, 12.
southeastern: Smith, W. D., 14.
Panama Canal Zone: MacDonald, 5.
Pennsylvania, Indiana County, peridotite dike: Honess, A. P., 4.
Lebanon County, Ordovician: Gordon, S. G., 3.
McCalls Ferry quadrangle: Jonas, 2.
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Quarryville quadrangle: Jonas, 3.
Porto Rico: Berkey, 1.
Coamo-Guayama district: Hodge, E. T., 1.
Humacao district: Fettke, 5.
Lares district: Hubbard, B., 3.
Ponce district: Mitchell, 7.
San Juan district: Semmes, 1.
Quantitative mineralogical and chemical classification: Hodge, E. T., 4, 11.
Quebec, Abitibi County, Duparquet and Destor townships: Buffam, 1.
Arnprior-Quyon area: Wilson, M. E., 10.
Beauceville area: MacKay, B. R., 4.
Coleraine area: Knox, J. K., 1.
Dufresnoy area, Abitibi district: Harvie, 3.
Duparquet area: James, W. F., 1.
Gaspe County, Lemieux Township: Alcock, 14; Mailhiot, 1.
Harricanaw-Turgeon basin: Tanton, 1.
Lake David area: Mawdsley, 5.
La Motte and Fournière areas, Abitibi County: James, 5.
Mount Albert area: Alcock, 6; Mailhiot, 2.
Monteregian province extensions: Stansfield, 4.
Monteregian Hills outliers: Howard, W. V., 1.
Mount Serpentine, Gaspe County: Alcock, 22.
northern: Cooke, H. C., 2.
Pontiac County, Calumet Island: Goranson, 3.
St. Urbain area, Charlevoix district: Mawdsley, 1.
Shickshock Mountains: Alcock, 21.
Timiskaming County, Rouyn area: James, W. F., 2.
Saskatchewan, Lake Athabasca region, norite rocks: Alcock, 7.
Wapawekka and Deschambault lakes area: De Lury, 6.
South Dakota, Black Hills: Paige, 4.
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western, coal field flora: Noé, 3.
Warsaw formation, Anisotrypa: Deiss, 1.
Wayne County, Warsaw formation, brachiopods: Ehlers, 11.
Mackenzie, Kinderhook: Hume, 6.
Maryland, Cantheliophorus: Bassler, 12.
coal measures: Swartz, C. K., 2.
insects: Cockerell, 37.
Mexico, Coahuila, Permian: Haack, 1.
Peregrina Canyon: Girty, 9.
Michigan, Grand Ledge: Kelly, W. A., 1.
Mississippian faunal zones: Weller, 12.

Paleontology—Continued.
Carboniferous—Continued.
Missouri, Henrietta formation, ostracodes: Knight, J. B., 1.
Henry County, coal floras: Round, 5.
Mississippian: Moore, R. C., 41.
upper Devonian and lower Mississippian faunas, relationship: Branson, 8.
Nebraska, Pennsylvanian, Fusulinidae: Dunbar, 11.
New Mexico, Abo sandstone, ammonoids: Böse, 4.
Nova Scotia, Horton-Windsor district: Bell, W. A., 2.
Ohio, Dunkard series: Stauffer, 1.
Oklahoma, Carter County, Dornick Hills formation, Foraminifera: Waters, J. A., 1.
Glenn formation: Girty, 5; Foraminifera: Harlton, 2.
Pennsylvanian foraminifers: Galloway, J. J., 13.
Pennsylvanian ostracodes: Coryell, 3; Harlton, 1, 4; Roth, 3.
Permian amphibian: Mehl, 15.
Permian Apus: Ruedemann, 8.
Seminole County ostracodes: Coryell, 4.
Stanley shale: Honess, C. W., 2.
Stonewall quadrangle: Morgan, G. D., 5.
Sycamore limestone: Cooper, 1.
Ostracoda, Pennsylvanian, Oklahoma and Texas: Harlton, 1, 4.
Paleozoic, late: Case, E. C., 2.
Paleozoic angiosperm, Illinois: Noé, 5.
Pennsylvania, Broad Top coal field, Pocono fauna: Girty, 12.
Calamites, East Bellevue: Grier, 1.
Pittsburgh: Leighton, H., 2.
Permian: Beede, 7; White, D., 17.
Permian tetrapods: Case, 20.
Permo-Carboniferous ammonoids, Glass Mountains, Texas: Böse, 1.
Pocono Brachiopoda: Price, W. A., 2.
Pottsville fauna, Ohio: Morningstar, 1.
Rhode Island, coal floras: Round, 5.
Schwagerina: Beede, 9.
Texas, Burkburnett: Glenn, 2.
Canyon formation, Fistulipora: Link, 6; Foraminifera: Waters, J. A., 2.
northern: Moore, R. C., 15.
Pennsylvanian foraminifers: Cushman, 42.
Pennsylvanian ostracodes: Harlton, 4.
Permo-Carboniferous red beds: Romer, 13.
San Saba County, Mississippian: Girty, 7; Roundy, 3.
Seymouria: Romer, 11.
Sutton County, Carboniferous Foraminifera: Cushman, 45.
Utah, Girty, 3.
Paleontology—Continued.
Carboniferous—Continued.
West Virginia, Mercer, Monroe, and Summers counties: Girty, 8.
Mineral and Grant counties: Reger, 7.
Mississippian: Girty, 4.
Nicholas County: Price, W. A., 7.
Permian vertebrates: Tilton, 10.
Webster County: Price, W. A., 1.
Wyoming, Tensleep formation: Brainerd, 2.
Cretaceous.
Alabama: Stephenson, 5.
Hymenaea: Berry, 5.
Alberta, Birch Lake sandstone marine fauna: Warren, P. S., 3.
cichlid fish: Jordan, D. S., 18.
Colorado shale: Warren, P. S., 8.
Edmonton formation, Red Deer River: Sternberg, C. M., 7; Warren, P. S., 3.
dinosaur: Parks, 19, 26; Sternberg, C. M., 10.
Edmontosaurus: Lambe, 1.
Laosaurus: Gilmore, 20.
Paskapoo formation, Mollusca: Russell, L. S., 1; plants: Berry, 73, 74.
Pelecypoda: McLearn, 3, 5.
Aralias: Fritel, 1.
Arizona, Ostrea: Reagan, 18.
Steamboat, Mancos-Dakota-Tununk formation: Reagan, 19.
British Columbia, Cassiar district, plants: Bell, W. A., 14.
California, Gastropoda: Stewart, R. B., 1.
Santa Ana Mountains: Packard, 4.
Cannonball fauna: Stanton, 3, 6; corals: Vaughan, 9.
Carolinas, invertebrates: Stephenson, 9.
Cheyenne sandstone flora, Kansas: Berry, 37.
Colorado, Mollusca: Reeside, 17.
northeastern: Henderson, J., 1.
Colorado group, Montana: Reeside, 6.
Coloradoan: McLearn, 10.
Cuba, oyster: Raymond, 31.
rudistids: Sánchez Roig, 15.
Dakota, so-called, Colorado and Wyoming: Reeside, 6.
Dakota flora, age: Berry, 23.
Dakota sandstone problems: Stanton, 5.
Didymotis trinidadensis, Lower Cretaceous, Trinidad: Sommermeier, 1.
Dinosaurs, Red Deer River: Sternberg, C. H., 1.
Eagle sandstone, cephalopods: Reeside, 12.
Fish scales: Cockerell, 1.
Gulf region: Berry, 4.
Greenland, plants: Seward, 3.
western, plants: Seward, 4.
Haiti: Woodring, 5.

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Cretaceous—Continued.
Jamaica: Trechmann, 5, 8.
crab: Withers, 1, 8.
decapod crustaceans: Withers, 2.
Echinoidea: Hawkins, H. L., 1, 2.
Kansas: Moore, R. C., 4; Twenhofel, 17.
fishes: Jordan, D. S., 14.
Martinichthys: McClung, 1.
Niobrara beds, Anguillavus: Martin, H. T., 1.
Niobrara cirriped: Withers, 5.
Manitoba, Foraminifera: Cushman, 33.
Maryland, Federal Hill: Berry, 16.
Upper Cretaceous, Ostracoda: Berry, E. Willard, 1.
Mesozoic floras of North and South America: Knowlton, 1.
Mexico, Coahuila, Turonian ammonite fauna: Böse, 3.
Guerrero, Zumpango: Burckhardt, 1.
Lower California: Anderson, F. M., 4.
Lower Cretaceous: Burckhardt, 2.
northern, ammonites: Böse, 9.
San Felipe formation: Stanton, 4.
southern, rudistids: Palmer, R. H., 7.
Tamaulipas, rudistid shells: Stephenson, L. W., 1.
Tampico Embayment area, Foraminifera: White, M. P., 1.
Zacatecas, Durango, and Guerrero: Böse, 6.
Morrison flora, Colorado: Knowlton, 4.
New Mexico, San Juan County, Reptilia: Gilmore, 4.
New York, Staten Island: Davis, W. T., 1.
North Carolina: Stephenson, 4.
decapod crustaceans: Rathbun, 3.
Mesozoic flora: Berry, 20.
Oklahoma, Cimarron County, Dakota sandstone plants: Noé, 9.
Love County, Comanchean: Bullard, 1, 2.
Marshall County: Bullard, 3.
Oregon, Cretaceous pterosaurian: Gilmore, 40.
ichthyosaurian: Merriam, 27.
Pacific region, Mollusca: Reagan, 7.
Plantae, catalog: Knowlton, 2.
Porto Rico, Ponce district: Mitchell, 7.
Ripley flora: Berry, 63.
Scaphites, Upper Cretaceous: Reeside, 14.
South Dakota, Badlands: Toepelmann, 1.
Fox Hills formation, beetles: Northrop, S. A., 1.
ganoid fish: Gregory, W. K., 11.
Palmoxylon, Pierre formation: Stevens, N. E., 1.
Ziebach County, boring: Stanton, 11.
Paleontology—Continued.
Cretaceous—Continued.
Tennessee, Carroll County, plants: Berry, 104.
Cretaceous flora: Berry, 28.
late Cretaceous plants: Berry, 17.
McNairy County, Hamulus: Wade, B., 2.
Ripley fauna: Wade, 3.
Texas: Adkins, 5; Scott, G., 2; Stanton, 13.
ammonites: Scott, G., 6.
Buda and Georgetown limestones, Turritella; Ellisor, 1.
central, Foraminifera: Carsey, 1.
Denton County: Winton, 3.
Cooke County: Bybee, 3.
Duck Creek formation, ammonites: Scott, G., 1.
Exogyra: Böse, 2.
Fredericksburg formation, ammonites: Scott, G., 5.
Fredericksburg and Washita formations: Adkins, 1.
micrology: Alexander, C. I., 1; Carpenter, M., 1; Mahon, 1; Moreman, 1.
northern, recurrent brachiopods: Sandidge, 1.
Pectinidae: Kniker, 1.
southern, ammonites: Böse, 9.
Tarrant County: Winton, W. M., 1.
Weichselia: Berry, 95.
Weno and Pawpaw formations: Adkins, 2.
Trigoniae, Pacific coast: Packard, 3.
Trinidad: Harris, G. D., 5.
rudistids: Harris, G. D., 4.
Trinity fauna: Vanderpool, 2.
Utah, Mollusca: Reeside, 17.
Washington, San Juan Islands: McLellan, 2.
Woodbine flora, Arthurs Bluff, Texas: Berry, 36.
Wyoming, Oregon Basin, Cody shale, Cephalopoda: Reeside, 13.
Devonian.
Alabama: Butts, 8.
Alberta, Banff area: Warren, P. S., 4.
Brachiopoda: Kindle, 32.
Crowsnest Pass: Warren, P. S., 7.
Lake Minnewanka section: Shimer, 6.
Peace River: Kindle, 47.
Arctic regions, Ellesmere Land: Tolmachoff, 1.
Arizona, Pinal Creek: Stauffer, 11.
Bothriolepis, Scaumenac Bay, Quebec: Bryant, 3.
Conodonts: Ulrich, 13.
Devonaster eucharis (Hall), six-rayed: Willard, B., 2.
Dolatocrinus and allies: Springer, 3.
Ellesmere Land: Kirk, 4; Tolmachoff, 2.
Floras: Berry, 91.
Glass-sponge colonies: Clarke, J. M., 10.

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Illinois, Oriskany: Savage, 15.
western: Savage, 7.
Iowa, annelid jaws: Searight, 1.
Aulopora: Fenton, M. A., 1.
Brachiopoda: Thomas, 14.
echinoderms: Thomas, 12, 23; geographic distribution: Thomas, 16.
Hackberry fauna: Fenton, C. L., 1, 3, 4.
Lime Creek shales: Thomas, 9.
Pentameracea: Belanski, 2.
Schizophoria: Fenton, M. A., 3.
Shellrock stage: Belanski, 3.
State Quarry beds: Stainbrook, 2, 3.
Mackenzie River valley, Crinoidea; Springer, 4, 14.
Maine, Chapman sandstone: Raymond, 21; Ostracoda: Ulrich, 1.
Michigan, Alpena, Cephalopoda: Foerste, 23.
Crinoidea: Ehlers, 9.
cystid, Lipsanocystis: Ehlers, 6.
gastropod and cephalopod: Ehlers, 5.
southeastern, Hamilton fauna: Ehlers, 12.
Minnesota: Stauffer, 3.
Missouri: Branson, 5.
Bailey limestone fauna: Tansey, 1.
central: Greger, 1.
Ste. Genevieve County, Little Saline limestone: Stewart, G. A., 1.
upper Devonian and lower Mississippian faunas, relationship: Branson, 8.
New York, Devonian crinoids: Goldring, 4.
Eighteenmile Creek, Callixylon: Hylander, 1.
Gilboa, plant material: Goldring, 7.
glass sponge: Clarke, J. M., 25.
Hamilton crinoids: Goldring, 8.
Hamilton group, Protobalanus: Van Name, 2.
Oriskany fauna, Oriskany Falls, Eaton, H. N., 3.
plant localities: Arnold, C. A., 1.
plants: Petry, 1.
Portage group, conodonts: Hibbard, R. R., 1.
seed fern forests: Goldring, 5.
Sherburne sandstone: Grabau, 6.
Vernon shale fauna: Ruedemann, R., 2.
Nova Scotia, Cephalopoda: Foerste, 27.
Ohio, Cleveland shale, fishes: Hyde, 4.
Delaware County: Westgate, 5.
Silica shale fauna: Stewart, G. A., 2.
Ontario, James Bay region: Savage, 2.
Pisces: Hussakof, 1.
Portage fauna, Mackenzie River valley: Kindle, 4.
Quebec, St. George: Clark, T. H., 9.
Paleontology—Continued.
Devonian—Continued.
Starfish, Gaspe: Ruedemann, 23.
Stringocephalus burtoni, distribution: Kindle, 10.
Tennessee, western: Dunbar, 1, 2.
Terebratulacea, Iowa: Belanski, 4.
Thread molds and bacteria: Moodie, 10.
West Virginia, Hardy County: Tilton, 13.
Mercer, Monroe, and Summers counties: Prouty, 14.
Mineral and Grant counties: Reger, 7.
Randolph County, trees: Reger, 15.
Jurassic.
Alberta: McLearn, 13.
Fernie formation, Ammonoidea: McLearn, 15; Pelecypoda: McLearn, 9.
British Columbia: McLearn, 13.
Hazelton group: McLearn, 11.
Parson Bay: Crickmay, 9.
Cardioceratidae: Reeside, 1.
Cuba, ammonite fauna: O'Connell, 3.
Viñales: Sánchez Roig, 1, 2.
western, fish fauna: Gregory, W. K., 8.
Mammalia: Simpson, G. G., 3.
Mexico, Oaxaca and Guerrero, cephalopods: Burckhardt, 3.
Zacatecas, Symon: Burckhardt, 1.
Montana, Ellis formation, Lithothamnium: Howe, M. A., 4.
Oregon, Mollusca: Hertlein, 2.
Plantae, catalog: Knowlton, 2.
Trigoniae, Pacific coast: Packard, 3.
Trinidad, Northern Range: Trechmann, 7.
Western North America: Crickmay, 5.
Wyoming, Como Bluff, Quarry 9: Simpson, G. G., 11.
Apatodonosaurus: Mehl, 19.
Ordovician.
Alabama: Butts, 8.
Arctic Cephalopoda: Foerste, 11.
Baffin Island, cephalopoda: Foerste, 29.
corals, brachiopods, gastropods, and ostracodes: Hussey, 2.
Beloit formation: Sardeson, 22.
Brachiopoda: Sardeson, 24.
Black River Brachiopoda, Mississippi Valley: Fenton, C. L., 5.
British Columbia, Glenogle formation, graptolites: Clark, T. H., 14.
Rocky Mountains: Wilson, A. E., 4.
upper Ordovician, Palliseria: Wilson, A. E., 3.
Cephalopoda: Foerste, 17, 28.
Ceratopyge fauna: Raymond, 16.
Cincinnatian, recurrent faunas: Shideler, 3.
Trilobita: Foerste, 3.
Colorado, Maclurites: Kirk, E., 8.
Dolgeville fauna: Ruedemann, R., 3.

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Ellesmere Land: Kirk, 4.
General: Jones, O. T., 1.
Greenland, northern, Cephalopoda: Troedsson, 2.
northwestern: Poulsen, 1.
Hudson Bay area, Cephalopoda: Foerste, 22.
Illinois, northeastern, Richmond fauna: Evans, J. R. C., 1.
Thebes sandstone: Savage, 1.
Indiana, Madison: McEwan, 2.
Iowa, Maquoketa shale: Bradley, J. H., jr., 1.
Maquoketa faunas: Ladd, H. S., 4.
Maquoketa depauperate fauna, Iowa: Ladd, H. S., 2.
Maquoketa echinoderms: Slocom, 1; Thomas, 22.
Kimmswick limestone, Missouri: Bradley, J. H., jr., 4.
Maryland: Bassler, 13.
Michigan, Escanaba River, Trenton, cystoids: Hussey, 3.
Richmond formation: Hussey, 1.
Minnesota, cephalopods: Sardeson, 17.
Crinoidea: Sardeson, 16.
problematic fossils: Sardeson, 18.
Missouri, Kimmswick and Plattin limestones: Foerste, 9.
Plattin formation: Fenton, C. L., 8.
Nevada, sponge fauna: Bassler, 22.
New York, graptolite zones: Ruedemann, R., 3.
Martinsburg, Trenton fauna: Clark, T. H., 1.
Newburgh quadrangle: Holzwasser, 1.
Utica and Lorraine formations: Ruedemann, 16–18.
Northwest Territories, Great Slave Lake: Hume, 18.
Ohio, Warren and Clinton counties: Austin, G. M., 1.
Ontario: Foerste, 15.
black shales: Parks, 32.
Credit River section: Dyer, 3.
Dundas formation: Parks, 17.
Lake Timiskaming area: Hume, 14.
Ottawa region: Wilson, A. E., 1.
St. Lawrence Valley: Wilson, A. E., 2.
Toronto area: Fritz, 1; Parks, 8, 9, 18; Pelecypoda: Stewart, B. H., 1.
Workman's Creek section: Fritz, 2.
Pennsylvania, central: Field, R. M., 1.
Platystrophia: McEwan, 1.
Quebec: Foerste, 15.
Anticosti Island: Twenhofel, 30; cephalopods: Foerste, 26.
Levis, Beekmantown series: Clark, T. H., 11.
Montreal, cephalopod: Clark, T. H., 16.
Philipsburg region, Beekmantown trilobites: Bradley, J. H., jr., 3.
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Ordovician—Continued.
Salterella, nature: Clark, T. H., 12.
Snake Hill fauna: Ruedemann, R., 3.
Stones River limestone: Coryell, 2.
Strophomena, Black River and Richmond: Fenton, C. L., 9.
Tennessee, Lenoir and Athens formations, brachiopods: Raymond, 37.
Ottosee and Holston formations, brachiopods: Willard, B., 5.
Stones River group: Coryell, 2.
Trenton limestone, ostracodes; Kirk, S. R., 1.
Trenton echinoderm faunas, distribution: Foerste, 3.
Trenton fauna, Ontario and Quebec: Raymond, 10.
Trilobita: Raymond, 6.
Utica and Lorraine shales, faunal facies differences: Ruedemann, 22.
Vermont, central: Richardson, C. H., 1.
Chazyan coral reef: Raymond, 24.
Fort Cassin: Foyles, 3.
Grand Isle: Ruedemann, 5.
Grand Isle County: Perkins, G. H., 9.
northwestern, trilobites: Raymond, 23.
Shoreham and Bridport: Foyles, 3.
Vertebrata: Tieje, 4.
Virginia, Lenoir and Athens formations, brachiopods: Raymond, 37.
Ottosee and Holston formations, brachiopods: Willard, B., 5.
West Virginia, Mineral and Grant counties: Reger, 7.
Mercer, Monroe, and Summers counties: Prouty, 14.
Wisconsin, Galena limestone: Ockerman, 1.
Ozarkian.
Brachiopoda, Cephalopoda, Notostraca: Walcott, 8.
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Algae, Archean: Gruner, 4, 6; Twenhofel, 3.
Floras: Berry, 100.
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Steep Rock series: Rothpletz, 2.
Huronian stromatoporoid-like masses, Webbwood, Ontario: Bain, 23.
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Alaska, Peard Bay region: Meek, 1.
Pleistocene: Dall, 2.
Arctic coast, Pleistocene: Dall, 9.
Arizona, Lake Cochise area: Bryan, 23.
Atlantic Coastal Plain, Pleistocene: Hay, 2.
British Columbia, Vancouver Island: Berry, 33.
southwestern, Pleistocene: Crickmay, 3.
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California, Carpinteria asphalt pit: Hoffman, R., 1; Stock, 20.
Los Angeles asphalt pits: Hay, 37.
Los Angeles County, Pleistocene clam: Oldroyd, I. S., 1.
Pleistocene, McKittrick asphalt deposit; Merriam, 9; llama: Merriam, 18; peccary: Stock, 23.
Pleistocene, Arctotherium: Merriam, 17; Foraminifera: Galloway, J. J., 8; Mollusca: Oldroyd, T. S., 1; ruminant: Stock, 19; Tanupolama: Stock, 24.
Rancho La Brea, flora: Frost, 2.
Megalonychinae and Mylodontidae, Rancho La Brea: Stock, 13.
Rancho La Brea, peccary: Merriam, 8; rodents and lagomorphs: Dice, 1.
southern, Vertebrata: Frick, 1.
Canada, Diatomaceae: Boyer, 1.
Colorado, Yuma County, Pliocene Mammalia: Cook, H. J., 2.
Echinoidea, west coast: Israelsky, 1.
Ecology in the interpretation of fossil faunas: Baker, F. C., 7.
Florida, age of Vero vertebrates: Hay, 36.
Citrus County, Pleistocene mammals: Simpson, G. G., 26.
Mammalia and Pisces: Hay, 1.
Mollusca: Mansfield, W. C., 1.
Pleistocene Physa: Clench, 1.
Frankstown cave vertebrates, Blair County, Pennsylvania: Peterson, 9.
Gulf States, Pelecypoda: Maury, 4.
General: Hay, 31.
Haiti, Balanus: Pilsbry, 3.
Helicina occulta, Iowa: Shimek, 1.
Illinois, loess, Alton: Baker, C. L., 2; Leighton, M. M., 5.
Grundy County, Pleistocene Mollusca: Baker, F. C., 6.
loess deposits, Mollusca: Baker, F. C., 13.
Pleistocene Mollusca: Baker, F. C., 8, 9, 11, 12.
Indiana, Pleistocene Mollusca: Baker, F. C., 3; Porter County: Lyon, 1.
Iowa, Cherokee, Pleistocene: Cable, 8.
Kansas, Pleistocene Bison: Martin, H. T., 5.
Wallace County, Pleistocene Mollusca: Hanna, G. D., 5.
Mammalian faunas, shifting: Adams, L. A., 2.
Mammoth, Cheney, Washington: Freeman, O. W., 6.
Maryland, Cumberland, Pleistocene peccaries: Gidley, 4.
Wailes Bluff, Pleistocene Mollusca: Smith, E. R., 1.
western: Gidley, 3.
Massachusetts, bison remains: Allen, G. M., 1.
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Quaternary—Continued.
Mexico, Lower California, Mollusca: Jordan, E. K., 1, 3; San Quentin Bay, Pleistocene: Orcutt, C. R., 1.
Pleistocene Mammalia: Furlong, 1.
Michigan, Oakland County, elephant: Sherzer, 2.
Minnesota, Bison: Hay, 17.
Mississippi, Pleistocene plants: Berry, 6.
Mollusca, marl deposits, Ottawa district, Ontario: Whittaker, 1.
Pleistocene: Maury, 5.
Nebraska, Archidiskodon maibeni: Barbour, 7, 8.
Elephas scotti: Barbour, 2.
Giraffa nebrascensis: Matthew, 2.
Tetrabelodon abeli: Barbour, 33.
western, Pleistocene: Matthew, W. D., 2.
New York, Pleistocene Mammalia: Hartnagel, 1, 4.
New York City, Pleistocene: Palmer, K. V. W., 3.
North Carolina, Pleistocene plants: Berry, 75.
Ohio, Pleistocene Mollusca: Baker, F. C., 2, 3.
Ontario, Pleistocene, crustacean: Kindle, 48.
St. Lawrence Valley: Whittaker, 3.
Toronto, muskox skull: Bensley, 1.
Oregon, Pliocene bear: Merriam, 22.
Plantae, catalog: Knowlton, 2.
Pleistocene: Baker, F. C., 1.
mammals: Hay, 45.
Maryland, Virginia, and North Carolina: Mansfield, W. C., 6.
mastodons: Hay, 32.
middle region of North America: Hay, 23.
Mollusca: Goldring, 3.
plants: Berry, 88; Alabama and Tennessee: Berry, 34.
Vertebrata: Hay, 4, 7, 8, 9, 15, 16, 24, 32, 39.
Pleistocene faunas, distribution: Goldring, 1.
Quebec, St. Lawrence Valley: Whittaker, 3.
San Pedro fauna, Nob Hill cut, California: Oldroyd, T. S., 3.
Tennessee, Pleistocene plants: Berry, 6.
Texas, Dallas County: Shuler, 1; Mammalia: Lull, 8.
Pleistocene fresh-water Mollusca: Hanna, G. D., 9.
southwestern, Pleistocene vertebrates: Hay, 33.
Vernon, Bison: Cook, H. J., 14.
Trinidad, Pleistocene flora: Berry, 67.
Utah, hairy mammoth: Hansen, 1.
Veneridae, eastern America: Palmer, K. V. W., 5.
Washington, Big Hope Island, Pleistocene: Henderson, J., 9.

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Silurian.
Alabama: Butts, 8.
Alaska, Bathmopterus: Kirk, 11.
Cymbidium: Kirk, 5.
Harpidium: Kirk, 3.
Pycnodesma: Kirk, 6.
Anticosti faunas: Jones, O. T., 1.
Arctic Cephalopoda: Foerste, 11.
Arkansas, St. Clair limestone: Thomas, N. L., 1, 2; brachiopoda: Thomas, N. L., 4; Trilobita: Foerste, 14.
Cephalopoda: Foerste, 19, 28.
Hudson Bay area: Foerste, 22.
northern Michigan: Foerste, 16, 17.
orthoconic: Foerste, 30.
Crinoidea: Springer, 12.
Echinodermata, Brassfield formation, Ohio: Foerste, 1.
Illinois, northeastern, Gastropoda: Wing, 1.
Orchard Creek shale: Savage, 1.
worm, Lecthaylus: Weller, 9.
Indiana, Jefferson County, Brassfield: Culbertson, J. A., 1.
Niagaran: Shrock, 2.
northern: Cumings, 5.
Iowa, Herpetocrinus: Thomas, A. O., 4.
Niagaran, Bilobites bilobus: Thomas, A. O., 25.
Manitoba, Hudson Bay region: Savage, 2.
Maryland: Swartz, C. K., 9.
Massachusetts, Essex County: Foerste, 6.
Michigan, Mackinac County, Heterolasma: Ehlers, 2.
New York: Ruedemann, 19.
adjacent faunal facies: Ruedemann, 20.
Crustacea: Clarke, J. M., 4.
new forms of life: Ruedemann, 7.
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Vernon shale fauna: Eaton, H. N., 5.
Northwest Territories, Great Slave Lake: Hume, 18.
Nova Scotia, Arisaig area: McLearn, 8.
Ohio: Foerste, 2.
Cedarville, cystids and blastoids: Foerste, 10.
Medinan fauna: Foerste, 14.
Ontario, Hudson Bay region: Savage, 2.
Lake Timiskaming area: Hume, 14.
Timiskaming area, Cephalopoda: Foerste, 18.
southwestern: Williams, M. Y., 1.
Whirlpool sandstone: Foerste, 14.
Quebec, Anticosti Island: Twenhofel, 30.
St. Clair limestone, Arkansas and Oklahoma: Ulrich, 14.
Trilobita: Foerste, 3.
West Virginia, Hardy County: Tilton, 15.
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Silurian—Continued.
West Virginia—Continued.
Mercer, Monroe and Summers counties: Prouty, 14.
Mineral and Grant counties: Reger, 7.
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